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UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY

March 3, 1962

Memorandum for the President

From: The Director of the U.S. Arms Control
and Disarmament Agency

Subject: U.S. Position at the Forthcoming Eighteen-
Nation Disarmament Conference

This memorandum raises policy questions and proposals which should be decided and agreed to by the U.S. Government, if possible, prior to the convening of the forthcoming Eighteen-Nation Disarmament Conference.

The issues raised below must be considered in the total context of U.S. foreign policy. It is assumed that U.S. foreign policy requires for its support all sources of U.S. influence, including U.S. military power. Any proposed change in the amount or nature of U.S. military power must be evaluated in terms of its effect on the ability of the United States to carry out its foreign policy taking into account that the effect of any such measure on the position of the United States and the free world vis a vis the Communist bloc. Reductions in U.S. military power, to the extent that those reductions affect power needed to support U.S. foreign policy in the present military environment, must therefore be matched by equalizing changes elsewhere - as, for example, in reduced

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Sino-Soviet capabilities - unless U.S. commitments can be reduced.

In this connection, the high level of damage which can be wrought by nuclear weapons and the means of delivering them raises a special problem. At the present time, the best estimate is that the United States has strategic nuclear superiority in the sense that it has the ability to fight a war with a level of damage to the civilian population as well as to the military establishment which, although high, is nevertheless lower than that suffered by a potential enemy. This superiority probably has meaning at the present time in that it is an important factor in the deterrence of Soviet aggressions, as for example, deterrence against a land attack in Europe. This superiority gives confidence to the United States and its Allies, especially those in NATO that such an attack can be deterred. At the same time, as the total nuclear forces on each side and particularly the means for delivering them, get larger and larger this superiority may lose much if not all of its meaning. The U.S. must seek to change the situation under which reliance for deterrence and confidence is placed on the possibility of escalation to nuclear war. The risk of such reliance over a period of time may be a devastating war. This means that the United States should seek to develop a policy which results in a reduction in the nuclear destructive capability in the world and also

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in the prevention of the proliferation of nuclear weapons to an increasing number of countries. This must be achieved without either adding disproportionately to the risk that war will occur or detracting from our ability to support our foreign policy.

A. U.S. Objectives at the 18-Nation Disarmament Conference.

The United States seeks four central objectives at the Disarmament Conference.

1. The first objective is to work out with the Soviet Union and the other nations at the Conference a program of general and complete disarmament including those measures to ensure that nations can safely live in a peaceful world. Such a program would serve as the basis of a treaty to be negotiated with all the major countries of the world.

The United States, on September 25, 1961, submitted to the United Nations such a program for general and complete disarmament in a peaceful world. This program, which is divided into three stages, indicates that the United States would negotiate for a large number of measures which are discussed in Sections B and C.

To achieve this first objective the United States, at the 18-Nation Disarmament Conference, must be prepared to give details on the disarmament and arms control proposals given in the September 25, 1961 program. The U.S. must give

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details, for example, on how and to what extent it proposes to reduce strategic delivery vehicles, and other armaments, how it proposes to place limitations on the production of strategic delivery vehicles, and on the production of other armaments, and how it proposes to verify that such reductions and limitations are being observed.

This first objective is a long-range one. It is not likely that it could be reached in the foreseeable future, given the current international political situation. Hence, the United States seeks other objectives which might be realized in the foreseeable future.

2. The second objective is to negotiate with the Soviet Union, as well as other countries which would be essential to any agreement, the widest measure of disarmament which could be implemented at the earliest possible date. In seeking this objective the United States must decide what disarmament measures can be negotiated separately from other measures. In many cases such measures might be limited to the U.S. and the U.S.S.R. or to the countries of the NATO and Warsaw Pacts. This paper proposes for consideration, for example, such measures as: reductions in strategic delivery vehicles, limitations on the production of such vehicles, and reductions in and limitations on the production of certain weapons designed to counter such vehicles; and a stoppage in the production of fissionable material for use in weapons and a transfer of certain amounts of fissionable materials from

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stockpiles for non-weapons purposes.

3. The third objective is to negotiate with the Soviet Union those initial arms control measures which, even though not involving actual reductions of armaments, would improve international security and the prospects for disarmament progress. The United States Government has already prepared a list including details of many such initial measures. They include: the advance notification of military movements, the establishment of observation posts, and the establishment of a commission to examine ways to reduce the risks of nuclear war by accident, miscalculation or failure of communications.

4. A fourth objective is to affect favorably the attitudes and actions of both our friends and our adversaries, regardless of whether agreement is reached. This is not primarily a matter of public relations. It is above all a matter of generating those pressures that will determine the actions of other nations in ways which react favorably on U.S. security and on the conduct of U.S. foreign relations. The manner in which the negotiations are conducted can affect a number of related foreign policy and national security problems including:

(a) The movement toward an integrated Western Europe closely allied with the United States and Canada in an Atlantic Community.

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(b) The opening up of the Soviet Union and a decrease in its penchant for secrecy.

(c) The development of a more responsible and sophisticated attitude toward the problem of armaments, especially on the part of the Soviet Union and also some of the neutral nations which approach disarmament with more enthusiasm than understanding.

(d) The positions taken by non-aligned countries.

B. Agreed Elements of the U.S. Position

As background for discussion of the issues remaining for decision, it should be noted that position papers developing our views on the following U.S. proposed measures have been prepared and discussed with our allies in recent meetings of the Western Five:

(1) Establishment of an International Disarmament Organization.

(2) Reduction, during Stage I, of force levels of the U.S. and U.S.S.R. to 2.1 million each.

(3) Establishment of a Chemical and Biological Experts Commission to examine the feasibility and methods of halting the production of, reducing and eventually eliminating stockpiles of such weapons.

(4) Establishment of a Nuclear Experts Commission to examine the feasibility and methods of reducing and eventually

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eliminating nuclear weapons stockpiles.

(5) Cessation of the production of fissionable materials for use in weapons.

(6) Establishment of appropriate safeguards over the transfer of fissionable materials between countries for peaceful uses.

(7) Prohibition on the relinquishment by nuclear powers of control of nuclear weapons or the transmission of information or material necessary for their manufacture to any state not owning them, with corresponding prohibition on the non-nuclear powers not to seek to acquire such control, information or materials nor attempt to manufacture such weapons.

(8) Prohibition on placing in orbit or stationing in outer space weapons of mass destruction.

(9) Advance notification of the launching of space vehicles and missiles, together with the track of the vehicles.

(10) Advance notification of major military movements and maneuvers.

(11) Establishment of observation posts at agreed major ports, railway centers, motor highways and air bases.

(12) Establishment of such additional inspection arrangements to reduce the danger of surprise attack as may be agreed.

(13) Establishment of an international commission to recommend further measures to reduce the risks of war by

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accident, miscalculation or failure of communications.

(14) Establishment of an international commission to study the reduction of military budgets and the use of budgets as a supplementary control device.

C. Issues to be Decided.

Against the background of objectives and areas of agreement cited above there are several key decisions which should be made regarding the United States position to be presented at Geneva. These new elements constitute the main points in the proposed United States arms control and disarmament program. Building upon the program the United States submitted to the General Assembly of the United Nations September 25, 1961, they constitute a total program which should advance all four of the U.S. objectives stated above.

The major issues which need to be decided are:

Should the United States be prepared to negotiate the measures dealing with strategic delivery vehicles as a separate agreement?

What method of reduction should be applied to strategic delivery vehicles?

What limitations should be imposed on the production and testing of such vehicles?

What method of reduction should be applied to other major armaments?

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What limitations should be imposed on the production of such armaments?

Is the inclusion of the Chinese required in an agreement on Stage I restricted to strategic delivery vehicles, or in an agreement including both strategic delivery vehicles and major other armaments?

1. Reduction of strategic delivery vehicles, reduction of weapons to counter such vehicles, and limitations on production and testing.

a. The United States should propose one of the following two alternatives for accomplishing the initial reduction of strategic delivery vehicles of the U.S. and the U.S.S.R. in Stage I. (The same formula could be applied to other countries possessing such vehicles, e.g., the United Kingdom.)

Alternative A

There would be a dual reduction with respect to strategic delivery vehicles, both by 30% of the total number of such vehicles and by 30% of the total strategic nuclear destructive capability. The following delivery vehicles would be considered as "strategic nuclear delivery vehicles": All armed combat aircraft with an empty weight of more than 15,000 kg., and all surface-to-surface and air-to-surface missiles with designed range of more than 300 km. The exact manner of reducing destructive capability has not been

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worked out, but a preliminary investigation suggests that an adequate criterion might be some function of the gross loaded weight of the delivery vehicles, aircraft and missiles being subject to the same weight formula.

If Alternative "A" is adopted one of the following methods might be selected dealing with production:

Method 1

Within the agreed limits of allowed levels of vehicles, production of new and improved vehicles would be restricted to 10 percent per year of the inventories existing at the beginning of each year. Since new and improved vehicles would be produced under this alternative, some testing would be required. Production and testing of vehicles for peaceful purposes would be permitted within specified limits and safeguards.

Method 2

Production would not be limited except to the extent that the total number of vehicles and the total destructive capacity of these vehicles, reduced to the extent provided above in Alternative A, be exceeded. Within these limits there would be freedom to vary the mix. To the extent permitted by these limits of production, testing would also be permitted. Production and testing of vehicles for peaceful purposes would be permitted within specified limits and safeguards.

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Alternative B

There would be a reduction by 30% in each and every type of strategic delivery vehicles as defined under Alternative A, above (e.g., B-52, B-47, Badger, Bison, Atlas, Titan, SS-5, SS-6, etc.)

There would be a complete cut-off in production of all strategic delivery vehicles except for necessary replacement in kind and supply of spare parts. This alternative would also require complete cessation of testing of all new designs or components. Production and testing of vehicles for peaceful purposes would be permitted within specified limits and safeguards.

b) The United States should propose that restrictions be placed in Stage I on the production, deployment and testing of anti-missiles missile systems by the U.S. and the U.S.S.R. The United States should also propose that existing weapons to counter strategic nuclear delivery vehicles would be reduced in the same manner as the strategic delivery vehicles themselves.

c) Although the initial U.S. position should be that reductions would apply only to the U.S. and the U.S.S.R., the United States should seek at an early date agreement with NATO countries on ways in which reductions of strategic delivery vehicles could be made on a NATO vs. Warsaw Pact basis.

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2. Reduction of all major armaments

In making proposals for reducing all major armaments of the U.S. and the U.S.S.R. in Stage I the United States should adopt one of the following two main alternatives which are related to the alternatives listed under paragraph 1, above, with respect to strategic delivery vehicles.

Nuclear warheads and weapons of chemical and biological warfare are not included in this discussion because the problems of inspecting stockpiles of such weapons are considered so great as to place them in another category for purposes of their reduction and control. For this reason the U.S. program for general and complete disarmament proposes that international experts commissions on nuclear weapons and on chemical and biological weapons be created to determine the feasibility and means for accomplishing the verified reduction and eventual elimination of the stockpiles of these weapons.

Alternative A

If Alternative A of paragraph I is adopted with respect to strategic delivery vehicles then the other major armaments might be reduced by one of the following two methods:

a. There would be a 30% reduction in the total number (and perhaps, simultaneously, in the total gross weight of armaments in certain of the various categories, particularly

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in combatant ships) in each of the following categories:

- (1) Armed combat aircraft (between 2500 and 15,000 kg. empty weight);
- (2) Tanks;
- (3) Armed cars and armored personnel carriers;
- (4) Surface-to-surface ballistic and aerodynamic missiles, air-to-surface missiles, and free rockets with range capabilities from 5 to 300 km.;
- (5) All artillery, and mortars and rocket launchers over 100 mm. in caliber; and
- (6) Combatant ships with standard displacement over 400 tons of the following classes: Carriers, battle-ships, cruisers, destroyer types and submarines.

b. As a further feature and within the above context of a 30% overall reduction, there might be a stipulation that, by mutual agreement, the U.S. would be willing to make a larger cut in some categories of weapons if it were permitted to make a smaller cut in other categories. The U.S. should also be willing to make additional reductions in categories in which it has larger numbers of arms than the U.S.S.R., if the U.S.S.R. would be willing to reciprocate in the categories in which it has larger numbers than the U.S.

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c. Under either of the above alternatives, there are two ways in which production and testing might be limited:

Method 1

Within the agreed limits of allowed levels of weapons, production of new and improved weapons would be restricted to 10 percent per year of the inventories existing at the beginning of each year. Since new and improved vehicles would be produced under this alternative, some testing would be required.

Method 2

Production would not be limited except to the extent that the total number of weapons reduced to the extent provided above in Alternative A could not be exceeded.

Alternative B

If Alternative B of paragraph 1 is adopted, with respect to strategic delivery vehicles, then the other major armaments

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would be reduced by the same method adopted for that alternative, i.e. by a 30% reduction in each and every type of armament.

There would be a complete cut-off in production of all armaments, except for necessary replacement in kind and supply of spare parts. This alternative would also require complete cessation of all new designs or components.

Note: Summary Comments on Basic Issues Included in
Alternative Methods of Reduction of all Armaments
Are Attached as Appendix A.

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3. Method of reduction

The United States should consider Stage I, for any measure or group of measures which it is proposing for Stage I, would be divided into ^{three} one-year steps. During the first part of each step (e.g. the first three of six months) one third of the total weapons to be reduced during Stage I would be placed in depots under international supervision. During the second part of each step, verification of retained levels would be undertaken and the deposited weapons would be progressively destroyed.

The same staging would be applied to force levels, in the release of one third of the personnel to be reduced during Stage I occurring in the first part of each step, and in the verification of retained levels occurring in the last part of each step.

4. Relationship of Communist China to disarmament

The United States should be prepared to undertake in Stage I any of the above-mentioned proposals for reductions in strategic delivery vehicles and other major armaments, and for the reduction of force levels to 2.1 million without inclusion of Communist China.

5. Separability of certain measures

The United States should be prepared to agree to separate measures involving reduction of strategic delivery vehicles, reduction of other major armaments, and the cut-off of production of fissionable materials for use in weapons. The United States should not, however, agree to reduce force levels

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without a satisfactory reduction in conventional armaments, nor to transfer fissionable materials to non-weapons purposes without a cut-off in the production of fissionable materials for use in weapons. These measures are in addition to those listed in Stage I all of which are considered separable.

6. The nature of an inspection system

The inspection system to be recommended by the United States must provide satisfactory verification that the strategic delivery vehicles and other armaments retained do not exceed agreed levels and that no clandestine production facilities exist. The degree of inspection required depends on a number of factors including the amount of disarmament involved in the particular measure adopted and the extent of qualitative break throughs which might be anticipated due to lack of limitations on the development and the production of new types of weapons.

The U.S. is studying a series of methods by which sampling techniques (including possible inspection by geographic zones) may be used as part of the inspection process.* There should be in the immediate future field tests in the U.S. of various techniques and methods for inspection. Methods of inspection are based upon the following principles:

- a. There must be a declaration of existing levels of forces, armaments and activities which are to be limited in Stage I.

*A preliminary report on the inspection is contained in Appendix B.

In each country would divide itself into an agreed number of appropriate zones, and during each step would provide the IDO with the total levels of forces, armaments and activities within each zone.

c. One or more of these zones would be subject to unannounced complete inspection in an agreed time period (with the additional possible requirement that once a zone were chosen for inspection it would remain open to further inspection).

d. In production facilities where production has been entirely stopped, only periodic spot inspections would be required. But resident inspectors would be stationed at all facilities in which production of limited items would be continuing.

e. Verification of the destruction of weapons and of the discharge of personnel would be conducted at location selected by the inspected country.

f. Search for clandestine weapons, forces and activities would be conducted in connection with zonal inspection described in subparagraphs b and c above. Such search would require both aerial and mobile ground inspection.

g. The United States must not rely on nationals of the inspected territory to play any major role in the inspection and verification process.

Studies based on the above principles have not reached the point where the U.S. can make a specific proposal based

upon them, but it is desirable to conduct explorations to determine whether these techniques would increase the negotiability of a satisfactory inspection system.

In the case of an agreement on limited measures between the U.S. and the USSR or between the NATO and the Warsaw Pact countries, the United States should be willing to accept a reciprocal inspection system. Such a system might be independent of an IDO, or the national inspection teams would be authorized to act as agents of an IDO.

The United States Delegation to the 18-Nation Disarmament Conference should be authorized to discuss on an informal basis with the Soviet Union and other countries the concept of a sampling inspection system including possible inspection by geographic zones.

7. Transfer of fissionable material from past production to non-weapons purposes.*

The U.S. would offer to transfer from past production to non-weapons purposes 40,000 kg. of weapons grade U-235 provided the Soviet Union also transferred the same amount. In making this proposal the U.S. would strongly urge that if the Soviet Union did not favor this formula it put forth a formula of its own. This proposal is linked to a cut-off in production of fissionable material for use in weapons.

*The question of the fusionable material, tritium, raises a special problem. Some means will have to be found of ensuring that the material can remain in U.S. production for both weapons and peaceful purposes.

the widest possible area of agreement and not limit discussion merely to Stage I. In order to blunt possible Soviet charges that we do not stand by that position as well as to make our presentations relevant to the staged September 25 plan, even though we emphasize the details of Stage I, the U.S. should indicate the following as what it envisages beyond Stage I:

"The U.S. looks upon Stage I as a period in which roughly one-third of the over-all program leading to general and complete disarmament will be achieved. In general the approach agreed upon for the various measures in Stage I should, with appropriate modifications, be continued for the corresponding measures in subsequent stages. Thus, as we resolve various Stage I problems, even though as is recognized in both the Soviet and U.S. plans, various matters relating to subsequent stages will require study during Stage I. We view Stage II as a period in which those states which had been participants in Stage I would accomplish roughly the second-third of the program of general and complete disarmament, recognizing that we might as a result of the negotiations agree that in certain fields we would advance further in Stage II than two-thirds of the way while in other fields it would be wiser, or necessary, to proceed more slowly. Our choices in this regard would be helped by our effort to resolve some of the Stage I problems.

At the same time, the United States would have to insist that various problems relating to peacekeeping

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measures should be resolved before the ~~end~~^{beginning} of Stage II, and final disarmament measures in Stage III must be conditioned on the putting into effect of strong peacekeeping machinery.

"Stage II, therefore, would include a continuation of the reduction process as well as of the prohibitions instituted in Stage I. In addition, during Stage II, the following additional measures would be undertaken.

(a) In the light of the studies of the CBR Experts Commission undertaken in Stage I, the production of CBR weapons would be halted and the existing stocks would be progressively reduced to the minimum levels that could be agreed upon for the end of Stage II.

(b) In the light of the studies of the Nuclear Experts Commission undertaken in Stage I, stocks of nuclear weapons would be progressively reduced to the minimum levels that could be agreed upon for the end of Stage II.

(c) Agreed military bases and facilities would be dismantled or converted to peaceful purposes. The number of bases to be included in this measure would depend upon the scope and nature of reductions in military capability agreed upon for the second stage.

(d) Limitations and reductions applied in Stage I to military personnel in active service would be extended to cover reserve forces.

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(e) Limitations and reductions schedules for armaments would be extended to cover those smaller armaments not dealt with in Stage I.

(f) Such agreed continued production of such armaments as nuclear delivery vehicles as might be permitted during Stage I would be discontinued at the beginning of Stage II except for agreed replacement in kind.

(g) Those states not included in the Stage I disarmament process would be included in Stage II.

10. Cessation of Nuclear Tests

A separate paper is being prepared with respect to the United States position concerning cessation of nuclear tests.

11. Regional Arrangements

No proposals are being presented at this time on original arrangements for Europe and other areas of the world, as no arms limitation measures on that subject have been agreed upon.

12. Peace-Keeping Measures

The United States has no specific positions regarding the exact steps and the timing of such steps which should be taken to strengthen the peace-keeping functions of the United Nations and other international institutions in order to assure that international disputes can be solved peacefully as disarmament progresses.

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Summary Comments on Basic Issues Involved in
Alternative Methods of Reduction of Armaments

1. An across the board cut of 30 per cent in all armaments of the U. S. and the USSR in a first-stage disarmament program of three years.

Such a policy would tend to maintain U. S. strategic nuclear superiority, to the extent that it now exists and has meaning in the future. At the same time such a policy would freeze U. S. conventional inferiority with respect to the Soviet Union.*

To the extent that the United States must rest its defense of Western Europe on a policy based on a first nuclear response to a large conventional attack, such an across the board cut would force a continuation of that policy. It would not only preclude redressing the conventional imbalance by means of a balanced disarmament program, but would also probably affect adversely the U. S. foreign policy of encouraging NATO countries to increase their conventional strength, since the U. S. conventional strength would not be allowed to increase. Nor would the conventional strength of our NATO allies be allowed to increase if they were party to the agreement.

* Strategic superiority is defined as having sufficient nuclear retaliatory power (in terms of numbers of weapons and also in terms of the advantage of having that power dispersed in the United States, in Western Europe, on the oceans, and to some extent on overseas bases other than Europe) that the U. S. would suffer less damage than the Soviet Union in a nuclear exchange, assuming even a first strike on the part of the USSR.

Conventional inferiority is defined as lacking the strength in armed manpower and in conventional land armaments, particularly in tanks, armored personnel carriers, artillery, and mortars, and the ability to deploy conventional armaments on the continent of Europe to fight and win or even to deter a substantial Soviet land attack in Europe without using strategic nuclear retaliatory power.

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2. A reduction of 30 per cent in the strategic delivery capacity of the United States and the Soviet Union, without reductions of other armaments.

Such a reduction would, other factors being equal, permit a continuation of the superiority of the U. S. in strategic nuclear weapons and would result in no reductions of the conventional armaments of the USSR. Also, if the reduction was achieved in a way in which some weapons improvement could take place, it would enable the United States to continue to pursue a defense policy of hardening its strategic nuclear delivery force. This factor is related to the timing of an agreement. An agreement which went into effect within the next year, and which allowed no changes in the mix of weapons held, would leave the United States without the production and deployment of its planned force of Minuteman and Polaris. With this timing and if the U. S. determined that a disarmament agreement should in no way be allowed to interfere with the building of such a strategic force, particularly in the early stages of any disarmament agreement, the U. S. might want to be able to reduce strategic delivery vehicles in a way which would permit this kind of a strategic force to be built. If, however, an agreement did not go into effect until sometime in 1964 at the earliest the United States would have achieved to a considerable extent the hardening and invulnerability of its strategic force and thus would not have the same need to build into the disarmament agreement provisions allowing a variation of the mix in strategic vehicles.

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A reduction in strategic delivery vehicles alone would also enable the United States to continue to build up its conventional strength, and would be more effective in encouraging our allies to a similar course. Such a policy would tend, therefore, to increase reliance on local conventional defense and decrease reliance on a nuclear first strike response to a Soviet conventional attack.

3. A reduction of strategic nuclear delivery vehicles and conventional armaments based on a trade-off of some U. S. strategic superiority for some USSR conventional superiority.

Such a policy would involve reducing the U. S. strategic nuclear delivery strength vis-a-vis the Soviet Union in return for reductions in Soviet conventional strength vis-a-vis the United States. It could involve some reductions in both strategic and conventional weapons by the U. S. and the USSR, but with each country taking a larger cut in those armaments in which it had the larger amount.

A disarmament measure based on some trade-off of strength implies that the U. S. would try to reduce its reliance on a first nuclear strike in response to a conventional attack, by reducing the Soviet superiority in conventional strength and by being willing, in return, to reduce U. S. strategic strength.

Preliminary Report on the Inspection Process

1. An effective inspection system for arms control can be devised provided:

a. Certain detailed technical features and requirements can be determined by field tests of principal airborne and ground-based inspection techniques at the earliest practicable date. A field test project, under conditions of priority authorization, can be organized and implemented over a period of about 18 months from date of funding. Detailed technical data will initially become available about six months after project initiation.

b. The terms of the treaty are generally designed to facilitate inspection; particularly with respect to limitation of inspection for clandestine activities to suitably defined geographic zones or other acceptable sampling schemes, and to detailed declarations from all country participants regarding those items to be controlled.

c. Reductions in armaments are sufficiently gradual so that the accuracy of the results of inspection during the early stages of the agreement is not required to be as high as those during later stages.

2. Although we cannot be specific in the absence of actual field experience, research thus far permits a reasonably accurate understanding of the general characteristics of the probable inspection system

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and a basis for informed major judgment as to the system's capabilities and limitations. These characteristics are as follow:

a. Declarations from all country participants of the numbers and (at least) regional locations of all activities which are to be controlled. Such declarations are necessary if the size and cost of an inspection system are to be of reasonable magnitudes, since it is a great deal easier to confirm or disprove than to acquire all necessary information on the basis of treaty-provided capabilities. Further, the substantial cumulative fund of unilateral intelligence can be fully utilized in order to examine the accuracy of declarations as an initial indication of the good faith of the other side.

b. Inspection for clandestine deployment and production activities, as well as the monitoring of declared deployed armament and major transport centers, should be carried out on the basis of a scheme of progressive zonal inspections, or some other suitable scheme of sampling the territory of the inspected country. The very substantial savings which this approach permits would not impose, we feel, a significant reduction in the capabilities of an inspection system to deter treaty violations on a country-wide basis, provided the inspecting country is free to choose, without warning, any zone from the scheme of zones formulated by the other side in accordance with agreed criteria.

c. Inspection of key production facilities for weapons systems, the total number and location of which are to be

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included in declarations, should be carried out on a country-wide basis to facilitate verification of these declarations and to prevent illegal production.

d. An inspection system of closely integrated airborne and ground-based elements is required if the necessary geographic coverage and interrelated detection capabilities are to be achieved.

(1) The airborne portion of the system must include negotiated provisions for continuous (subject to weather limitations) medium and low-altitude aerial reconnaissance of zones chosen for inspection. Surveillance aircraft must be provided a multisensor capability including, but not limited to, photography, infra-red sensors and radar sensors. Both airborne and ground-based computers would be used in the analysis and synthesis of the acquired data. The principal duties of the airborne component would include:

- (a) detection of illegal movements out of chosen zones,
- (b) verification of declared deployment activities and the location and characteristics of declared production facilities, (c) surveillance of transport centers (airfields, major rail, road, and port centers), (d) detection of possible clandestine production or deployment activities within zones requiring, in many cases, confirmation by ground-based inspection operations. Within existing technology but with

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improvements in the state-of-the-art which can be achieved within 12 to 18 months under priority conditions, airborne surveillance operations can acquire a day, night, and all-weather capability to detect, and in many cases to identify ground activities down to object sizes of not over a few square feet. Airborne operations could be staged from bases outside the country being inspected but at considerable probable cost to the effectiveness of inspection capabilities of the system as a whole.

(2) The ground-based portion of the inspection system would require two kinds of operations: resident inspectors at declared production facilities (country-wide) and major transport centers (airfields, rail, road and port centers within zones and on zone boundaries); and mobile ground inspection teams which would verify declarations of deployed armament (within zones) and would patrol throughout the chosen zone in order to detect clandestine deployment and production activities. These teams would discharge the latter function on the basis of independent reconnaissance capabilities or upon indications of illegal activities furnished by the airborne organization or other (e.g., unilateral intelligence) sources. With the redundant coverage provided by air and ground surveillance of production, deployment, and transport activities, relatively small numbers

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of inspectors would be required at declared production facilities (in the hundreds). However, effective control of transport centers will employ rather larger numbers of inspectors (in the thousands).

e. If a scheme of zonal inspection were to be adopted, for purposes of verifying declared deployment activities and detecting clandestine deployment and production activities, the interval between the time a zone is chosen for inspection and the arrival of inspectors within the zone will be a period during which detection capabilities are lowest. If ground-based and airborne activities are staged out of a central base within the country being inspected, the duration of this period of maximum vulnerability should not exceed several hours. A moratorium on all movements across boundaries of the selected zone during these hours would materially decrease the vulnerability. During this time, it would be necessary to rely on unilateral intelligence capabilities to detect illegal movements out of the zone to be inspected. On the other hand, we do not feel that such movements are possible to a significant degree, provided the country which is to be inspected has no prior knowledge of the zone which is to be chosen and is, therefore, unable to prepare for evasive actions.

3. ACDA feels that the combined capabilities of such a system would be quite substantial and would permit implementation of a comprehensive

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disarmament treaty with a high level of assurance that significant degrees of evasion would be detected and identified. Our confidence does not derive from the capability of any single sensor or technique but rather from the overall capabilities of the system as a result of interactions between the numerous inspection techniques and the redundant coverage permitted by integrated sub-systems, plus recent development in the computer art which permit rapid synthesis of readings from many sensors and sources into a single result.

4. Preliminary figures indicate that an inspection system employing the country-wide and zonal characteristics described above might be implemented with perhaps a 10,000 to 25,000 man organization for coverage of the USSR and other Warsaw Pact countries. On the other hand, if all inspection activities were to be implemented on the basis of country-wide inspection of all activities subject to control, the inspection organization would probably require a staff of the order of 50,000 to 100,000 people. Either figure, we feel, is subject to substantial variation (perhaps up to 50 per cent) depending on the actual detection sensors and related states-of-the-art which are achievable at existing levels of technology within the near future. Our judgment in this regard is conditioned by the premise that appropriate research and development programs are instituted and carried out with the indicated sense of urgency.

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62-9246

FILE 1882

and
Mr. Adrian S. Fisher
Acting Director
United States Arms Control and
Disarmament Administration
Washington 25, D. C.

Dear Mr. Fisher: *Bukh*

In response to your letter of 9 February 1962, this Agency will be glad to provide the support you have requested for the US Delegation at the forthcoming Eighteen-Nation Disarmament Conference. Specifically, we stand ready to supply representatives for the ad hoc technical groups to be established by the ACDA.

I have designated [] who is on the staff of the Deputy Director for Intelligence, to serve as point of contact within this Agency for the arrangement of details.

Pursuant to the telephone conversation of 15 February between Admiral Parker and [] I am attaching for your consideration a suggested revision of the list of groups which came with your letter. I believe that the revised list permits somewhat more homogenous groupings, and that it would simplify the organization of our support.

Sincerely yours,

U.S. Arms Control *12/ Bob Amary*

for John A. McCone
Director

ODDI: [] (16 Feb 62)
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Deputy Director (Intelligence)

Date: _____

SUGGESTED AD HOC GROUPS FOR THE SUPPORT OF ARMS CONTROL NEGOTIATIONS

- Group 1 Phasing of Disarmament Measures
National Security During the Disarmament Process
Regional Disarmament
- Group 2 Strategic Armaments
Measures to Reduce the Risks of War by Accident, etc.
- Group 3 Conventional Armaments
Military Bases
Force Levels
- Group 4 Verification Procedures
- Group 5 Nuclear Cut-Off/Application of IAEA Safeguards
Nuclear Armaments
- Group 6 CBR
- Group 7 Outer Space

Measures to Prevent Transfer of Weapons: This subject cuts across the activities of several of the groups, and should probably be considered by each as appropriate. If it is desired to place this activity in a particular group, the single best place would probably be Group 5.